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So, what's a broadside?

Creating an Arts Access Guide on the World Wide Web: Access to Art in Portland, Oregon

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Due to advances in medical science and increasing life expectancy, the proportion of people with disabilities in the United States will continue to increase (Shapiro, 1993, p.6). The Americans with Disabilities Act has allowed people with disabilities to receive equal access to all public programs and services. Due to these trends, new attitudes about the definition of disability are forming. It is important for communities to honor the access needs of community members with disabilities by providing necessary services, proper design of the built environment and appropriate information resources.

In light of this, I will outline a recent project regarding the accessibility of performing arts services in Portland, Oregon. As a result of this project, a Web-based performing arts access guide for Portland was created and can be accessed at

Image: Logo for Access to Art

<http://www.pdxaccessart.org>. The goal of this project was to inspire more people to take advantage of the many accessible performing arts opportunities in Portland, and to show the need for more available and accessible programming. Although this project is a small step, I envision an arts community that begins to automatically address accessibility in the creation of any facility, program or communication vehicle. An arts access guide can be created for any community and can be a catalyst for further discussion regarding accessibility issues. The following narrative addresses the steps taken and resources used to create Portland's performing arts access guide. A similar approach can be applied to any organization and/or community wishing to create a comparable resource.

Portland's Web-based performing arts access guide provides information for participants of performing arts experiences with disabilities that will enable them to attend events more easily and be better informed about Portland performing arts accessibility. A Web-based guide was created in order to reach the largest possible audience in the most cost effective manner.

The following steps were followed in order to complete the guide:

1. Information was collected about Portland performing arts access services
2. Performing arts access needs of people with disabilities were researched
3. Web site accessibility guidelines were reviewed, and
4. A Web site was created using the compiled information.

Collecting Information about Access Services

Performing arts organizations included in the online guide were determined by retrieving dance, music, theater and multi-discipline arts organization names and contact

information from Portland's Regional Arts & Culture Council. A survey of these organizations provided the basis of the data for the access guide.

Organizations that did not respond to the survey were still included in the site. However, only contact information is included on the site for those organizations. Most survey response questions directly contributed to the online access guide.

Access guide information from the survey responses included:

1. Organization name, Address, Phone, TTY, fax, email and URL.
2. Contact person and their job title.
3. Artistic Discipline.
4. Services/Programs specifically designed for people with disabilities.
5. Services/Programs accessible on a regular basis.
6. Performance venue address if applicable.
7. Performance venue accessible entrance.
8. Performance venue seating information.
9. Other performance venues used by each organization.
10. Accessible office and venue parking information.
11. Tri-Met (Portland Metropolitan area public transportation) information.
12. Box office phone, TTY, fax, and email if applicable.
13. Special seating arrangements for people with disabilities are honored.
14. Other ticketing services utilized by the organization.

Organizations' responses to the survey questions were recorded verbatim in a FileMaker database and then exported to an Excel file where responses were standardized in order to create a workable search function in the Web site. This search function was designed to match Disability Access Symbols by the Graphic Artists Guild <http://www.gag.org> to those access services that are applicable.

Focus Groups: Knowing Accessibility Needs

The design of the access guide and how arts access service information was represented was guided by two focus groups. The focus groups included participants with knowledge of the performing arts in Portland and of the access needs of people with hearing, vision, physical and cognitive disabilities.

The first focus group meeting informed what elements should be included in the site, how the site navigation should flow for people with disabilities and the consideration of basic performing arts access needs of people with disabilities. Focus group participants recommended that the access guide include contact information including an appropriate

contact person from each organization, address of organization, phone, TTY, and fax as well as email and the Web site URL if applicable. Focus group members also recommended that the site include the specific access services available for people with disabilities, a way for people to send comments or questions about the Web site, and links to organizations that have information about accessibility issues. Focus group participants were also asked to draw how the Web site navigation should flow for the people with disabilities who might use it.

The second focus group meeting regarded how to refine the Web site prototype in order to make it more accessible and useful for people with disabilities. Suggestions included fine tuning the site by creating more contrast in navigation bar colors, adding the Disability Access Symbols <http://www.gag.org> to the search function results and organization list, placing the symbols legend higher on the navigation bar to make it easier to find, and moving the event lists link lower on the navigation.

Web Site Accessibility

One of the most important steps to consider when building an accessible Web site is to look at the many Web accessibility guidelines available. Most guidelines intended for accessible design of Web sites strive to encompass many different access needs utilizing the mantra of universal design. For this project, the review of web accessibility guidelines focused on those instruments that aim to build Web sites for use by the widest possible audience.
When building a Web site, especially one targeting people with disabilities, it is important to understand that, according to World Bank, seventy-six percent of Americans with disabilities are online and utilizing Internet services. Despite these figures, approximately ninety-eight percent of existing Web sites are inaccessible (McGrane, 2000).

Many Web site accessibility guidelines address the design of sites for use by as many people as possible and encompass a wide range of strategies to consider in the construction of a Web site. The most common considerations are: designing a site for multiple platforms and browser capabilities, considerations of graphics, appropriate use of copy and color, form and functionality, multi-accessible HTML, and compatibility with available assistive technology. The following is a list of Web Site accessibility guidelines that I recommend:

1. Universal Web Design: A Comprehensive Guide to Creating Accessible Web sites (1997) by Crystal Waters. The guide takes the term universal design, most commonly used to refer to the development of physical buildings and spaces, and transfers it to the construction of a Web site that can be useful to the widest possible audience.

2. CAST's Bobby <http://www.cast.org//bobby> "Bobby" exists both as a guide for Web site creation, and also to help the designer analyze a site's accessibility. This Internet access method is available through the Center for Applied Special Technology (CAST). CAST's analysis tool, titled "Bobby," specifically reviews a Web site for the accessibility of people with disabilities. The Web site creator may submit their URL to "Bobby's" Web site. "Bobby" then reviews the Web site for compatibility with various browsers and automatically reviews the site for compatibility with HTML 4.0. "Bobby" creates a specific accessibility report communicating the site's access barriers and solutions of how to eliminate them. If a site complies with the accessibility guidelines and recommendations, it is allowed to display the "Bobby Approved!" icon (Collett, 1999).
3. W3C <http://www.w3.org> The WWW Consortium's "Web Content Accessibility Guidelines" have established stable principles for accessible Web site design. This includes the need to provide equivalent alternatives for auditory and visual information. Each guideline suggested has corresponding benchmarks, which explain how these accessibility elements might apply to specific features of Web sites. One example given by W3C is that providing alternative text for images ensures that information is available to a person who cannot see images. A checklist is included in the guidelines as a tool for reviewing the accessibility of a Web site.
4. Microsoft Accessibility: Technology for Everyone <http://www.microsoft.com/enable/dev/web/guidelines.htm> Within Microsoft Accessibility: Technology for Everyone, Microsoft lists Twelve Top Tips for Accessible Web Design. The tips include:
    1. Good ALT text for all graphics,
    2. Proper use of image maps,
    3. Useful link text,
    4. Good keyboard navigation,
    5. Alternatives to all controls and applets,
    6. Alternate pages that don't use frames,
    7. Proper use of tables and alternatives,
    8. Support for the reader's formatting options,
    9. That the use of style sheets is not required to use the site,
    10. File formats the reader can use,
    11. Avoidance of using scrolling marquees, and
    12. Titles provided for most objects.

    The tips are followed by explanations of how to approach each one in implementing accessible design in each portion of a Web site. Solutions to common accessibility problems are also being examined by Microsoft.

These recommended resources reveal several useful Web design accessibility tools published by well respected organizations and institutions. It is important when creating a

Web site, especially one specifically designed to benefit people with disabilities, to remember that:

1. Creating accessible Web sites can be accomplished utilizing the many guidelines and clearly defined strategies that are now available.
2. Web sites should be as accessible to as many people as possible, especially with the growing number of people with disabilities.
3. Accessible Web sites do not need to be unattractive or undynamic in design.
4. As the guidelines discussed in this review attest, Web sites that are built intelligently can benefit all Internet users, not just those with disabilities.

Creating an Accessible Web Based Arts Access Guide

In order to prepare for the technical design of the Web site, two application programs, Macromedia's Dreamweaver 3.0 and Fireworks 3.0 <http://www.macromedia.com>, were referenced. Dreamweaver is an application that enables a Web site designer to layout pages that automatically attribute appropriate HTML syntax to page features. And, Fireworks allows for a Web site developer to design images and graphics that interface with Dreamweaver so that the Web page is fully functional without the developer needing to be fluent in HTML.

Early in the creation of the Web site a Web map or flow chart was created to decide the Web sites' hierarchy and navigation flow. Titles of pages and their content were laid out to help the developer organize the Web site according to the most logical flow and design. The first focus group meeting was an important factor in deciding the navigation flow, pages and components of the Web site.

After the Web map was created, a storyboard was developed that took the Web map's ideas further. The storyboard allowed for each page to be clearly laid out before actual construction and design. Guidance for the web map and storyboard creation was found in Interactivity by Design (Kristof and Satran, 1995).

Portland's Arts Access Guide Web site pages include:

- A home page,
- A page with a brief explanation of this project,
- A local performing arts event list links page,
- A search page where users can search for organizations based on discipline and type of access service,
- A page with a list of all of the organizations in the guide,
- A page with arts specific access links,

- A page with general access links, and
- A page that gives an explanation of the Disability Access Symbols <http://www.gag.org> used in the site.

As users identify results of a specific search, they can select an organization that matched their search criteria and go to a page with more detailed information about that organization's survey data and even go to that organization's Web site if applicable. Nineteen Disability Access Symbols <http://www.gag.org> and arts discipline symbols were used in the site to aid accessibility of information for people who have cognitive disabilities.

The site was designed using a Web site accessibility checklist that was created based on the review of Web site accessibility guidelines. The site also utilized style sheets based on the recommendations of W3C. A template and Cascading Style Sheets were used to control layout while maintaining flexibility for the variety of users' needs. Single cell tables were used to create color blocks and the navigation bar instead of images that might take the site longer to download and not as accessible. For all images used without descriptive text next to them, a D link was used. D links are a standard for accessible Web sites and the concept was developed by the National Center for Accessible Media <http://www.wgbh.org/wgbh/pages/ncam>. A D link is a link to a page that describes the image in detail for users of screen readers and/or those who cannot access images.

After these initial steps, it was imperative that a server for the site be determined. Useractive.com, a service available through the University of Illinois, now hosts the site <http://www.useractive.com>. By utilizing Useractive.com, security implications with the site's data could be restrained. It is now possible to manage the site remotely and still maintain the database through a secure area that is on-site.

Due to the substantial amount of dynamic data and the site's main focus on search capability, it was important to create a site that was easily searchable, active, and long-term maintainable. An embedded scripting language was used called PHP. PHP is specially designed for database access and presenting data via the Internet and has a Web site that includes all information on using PHP <http://www.php.net>. MySQL (structured query language) was also used, based on its Web site information, as a standardized relational database language that allows the use of a database structure on the Web site without having the design tied to commercial software <http://www.mysql.com>. Both PHP and MySQL are open-source products that many ISP's use for data searches. The Web-based arts access guide was designed using documented HTML standards instead of custom language. Open Internet HTML standards allows for a more accessible Web site.

After the Web-based arts access guide was designed and functioning, and the second focus group informed initial revisions, the site was tested on multiple browsers from 3.0 to 5.0, screen reader software for Macintosh titled outSPOKEN <http://www.aagi.com/aagi/outspoken_products.html>, and on both Macintosh and PC compatible platforms. The site was also submitted to "Bobby" for an accessibility check. In order to build awareness of the access guide's existence, a postcard was designed to send out to arts organizations surveyed as well as appropriate organizations that serve people with disabilities in Portland.

Conclusion

My hope is that this project will inspire more people to take advantage of the many performing arts opportunities in Portland that should be available and accessible. In light of this project's conclusions and recommendations, I feel that the future of accessible performing arts experiences and accessibility in general will begin with education and with communities putting priority on the creation of holistically accessible facilities, programming and communication materials considering the needs of all possible audience members.

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